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PTO/SB/08A (10-96)

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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE



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Substitute for form 1449A/PTO (Modified by BSTZ 6/30/99) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		O I P E FEB 09 2001 PATENT & TRADEMARK OFFICE		<i>Complete if Known</i>			
		Application Number		09/738,086			
		Filing Date		12/15/2000			
		First Named Inventor		Xiaodong Li			
		Group Art Unit		Not yet assigned			
		Examiner Name		Not yet assigned			
Sheet	1	of	3	Attorney Docket Number		005158.P002	

U.S. PATENT DOCUMENTS					
Examiner Initials *		U.S. Patent Document	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
		Number			
T.G.		6,067,290	Paulraj et al.	5/23/2000	
		6,064,694	Clark et al.	5/16/2000	
		6,052,594	Chuang et al.	4/18/2000	
		6,005,876	Cimini, Jr. et al.	12/21/1999	
		5,973,642	Li et al.	10/26/1999	
		5,956,642	Larsson et al.	9/21/1999	
		6,041,237	Farsakh	3/21/2000	
		6,064,692	Chow	5/16/2000	

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS			
Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).		Translation? Yes/No
T.G.	BENDER et al., CDMA/HDR: A Bandwidth-Efficient High-Speed Wireless Data Service for		
	Nomadic Users, IEEE Communications Magazine, July 2000, pp. 70-87.		
	FRULLONE et al., PRMA Performance in Cellular Environments with Self-Adaptive Channel		
	Allocation Strategies, IEEE Transactions on Vehicular Technology, November 1996, pp.657-665		
	Vol. 45, No. 4.		

Examiner Signature	<i>Hean Hsland Gelin</i>	Date Considered	3/17/04
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OTHER DOCUMENTS		
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J.G.	XU, GUANGHAN and LI, SAN-QI, Throughput Multiplication of Wireless Lans for Multimedia	
	Services: SDMA Protocol Design, 1994 IEEE, pp. 1326-1332.	
	WARD, JAMES and COMPTON, R. TED, JR., High Throughput Slotted ALOHA Packet Radio	
	Networks with Adaptive Arrays, IEEE Transactions on Communications, March 1993, pp. 460-470,	
	Vol. 41, No. 3.	

Examiner Signature	<i>Jean Kelland Gelin</i>	Date Considered	3/17/04
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Application Number	09/738,086
Filing Date	12/15/2000
First Named Inventor	Xiaodong Li
Group Art Unit	Not yet assigned
Examiner Name	Not yet assigned
Attorney Docket Number	005158.P002

Sheet 3 of 3

U.S. PATENT DOCUMENTS

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	Number				

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OTHER DOCUMENTS

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J.G.	TSOULOS, G.V., Smart antennas for mobile communication systems: benefits and challenges,	
	Electronics & Communication Engineering Journal, April 1999, pp. 84-94.	
	SHAD et al., Indoor SDMA Capacity Using a Smart Antenna Basestation, 1997 IEEE, pp. 868-872.	
	FARSAKH, CHRISTOF and NOSSEK, JOSEF A., On the Mobile Radio Capacity Increase	
Y	Through SDMA, no date (after 1997).	

Examiner
Signature

Jean Allard Gelin

Date
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3/17/04

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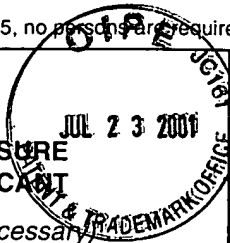
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First Named Inventor	Xiaodong Li
Group Art Unit	Not Yet Assigned
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Attorney Docket Number	05158.P002

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		Number			

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J.G	Bender, et al. "CDMA/HDR: A Bandwidth Efficient High-Speed Wireless Data Service for Nomadic Users,"	Yes
	IEEE Communications Magazine, July 2000, pgs. 70-87.	
	Frullone, et al., "PRMA Performance in Cellular Environments with Self-Adaptive Channel Allocation	Yes
	Strategies," IEEE Transactions on Vehicular Technology, Vol. 45, No. 4, November 1996, pgs. 657-665.	

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Substitute for Form 1449A/PTO (Modified)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	09/738,086
Filing Date	December 15, 2000
First Named Inventor:	Xiaodong Li
Group Art Unit	2681
Examiner Name	Unassigned
Attorney Docket Number	005158.P002

Sheet	2	of	2
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OTHER ART – NO PATENT LITERATURE DOCUMENTS

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Examiner Signature	<i>Dean Donald Gelin</i>	Date Considered	<i>3/17/04</i>
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¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.

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Substitute for Form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
SEP 19 2002 PATENT & TRADEMARK OFFICE				Application Number	09/738,086
				Filing Date	12/15/2000
				First Named Inventor:	Xiaodong Li
				Group Art Unit	2681
				Examiner Name	Unassigned
Sheet 1 of 2	Attorney Docket Number 005158.P002				

U.S. PATENT DOCUMENTS						
Exam. Initial*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Code ²	Kind (If known)			
J.G	H	6,377,632	B1	Paulraj et al.	04/23/2002	
	I	6,131,016		Greenstein et al.	10/10/2000	
	J	6,026,123		Williams	02/15/2000	
	K	5,914,933		Cimini et al.	06/22/1999	
	L	5,726,978		Frodigh et al.	03/10/1998	
	M	5,708,973		Ritter	01/13/1998	
	N	5,555,268		Fattouche et al.	09/10/1996	
	O	5,504,775		Chouly et al.	04/02/1996	
	P	5,479,447		Chow et al.	12/26/1995	
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FOREIGN PATENT DOCUMENTS								
Exam. Initial*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (If known)				
JG	Q	EP	0 869 647	A2	Lucent Technologies Inc.	10/07/1998		

Examiner Signature: <i>Jean Allard Gelin</i>	Date Considered: <i>3/18/04</i>
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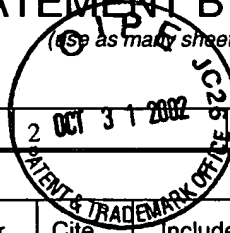
¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). ⁴For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

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		Application Number	09/738,086		
		Filing Date	12/15/2000		
		First Named Inventor:	Xiaodong Li		
		Group Art Unit	2681		
		Examiner Name	Unassigned		
Sheet	2	of	2	Attorney Docket Number	005158.P002
OTHER ART - NO PATENT LITERATURE DOCUMENTS				Technology Center 2600	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²
J. G	Y	GRUENHEID, R. et al.: "Adaptive Modulation and Multiple Access for the OFDM Transmission Technique", Wireless Personal Communications, Kluwer Academic Publishers, NL, Vol. 13, NR. 1/2, Year 2000, pages 5-13 XP000894156, ISSN: 0929-6212.			
	Z	MOTEGI, M. et al.: "Optimum Band Allocation According to Subband Condition for BST-OFDM" 11 th IEEE International Symposium on Personal Indoor and Mobile Radio Communications, vol. 2, 18-21 September 2000, pages 1236-1240, XP002213669, Piscataway, NJ, USA, ISBN: 0-7803-6463-5.			
	AA	KAPOOR, S. et al.: "Adaptive Interference Suppression in Multiuser Wireless OFDM Systems Using Antenna Arrays" IEEE Transactions on Signal Processing, vol. 47, no. 12, December 1999, pages 3381-3391, XP000935422, IEEE, New York, USA, ISSN: 1053-587X.			
	BB	YE LI, et al.: "Clustered OFDM with channel estimation for high rate wireless data", Mobile Multimedia Communications, 1999. (MOMUC '99). 1999 IEEE International Workshop on San Diego, CA, USA, IEEE, US, 15 November 1999, pages 43-50, XP010370695, ISBN: 0-7803-5904-6.			
	CC	NOGUEROLES, R. et al.: "Improved Performance of a Random OFDMA Mobile Communication System" Vehicular Technology Conference, 1998. VTC 98. 48 th IEEE Ottawa, Ontario, Canada, 18-21 May 1998, (1998-05-18), pages 2502-2506, XP010288120, ISBN: 0-7803-4320-4.			
	DD	KINUGAWA, Y. et al.: "Frequency and Time Division Multiple Access with Demand-Assignment Using Multicarrier Modulation for Indoor Wireless Communications Systems", IEICE Transactions on Communications, Institute of Electronics Information and Comm. Eng. Tokyo, Japan, vol. E77-B, NR. 3, March 1994, pages 396-402, XP000451014, ISSN: 0916-8516.			

Examiner Signature		Date Considered	3/17/04
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Application Number	09/738,086
Filing Date	December 15, 2000
First Named Inventor:	Xiaodong Li
Art Unit	2681
Examiner Name	Not Yet Assigned
Attorney Docket Number	005158.P002

Sheet	1	of	1	Attorney Docket Number	005158.P002
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Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If known)				
J.G. ↓		US-	5,734,967	3/31/1998	Kotzin et al.	
		US-	5,886,988	3/23/1999	Yun et al.	
		US-	5,887,245	3/23/1999	Lindroth et al.	
		US-	5,933,421	8/3/1999	Alamouti, et al.	
		US-	6,061,568	5/9/2000	Dent	
		US-	6,108,374	8/22/2000	Balachandran et al.	
		US-	6,226,320 B1	5/1/2001	Hakkinen et al.	
		US-	6,366,195 B1	4/2/2002	Harel et al.	
		US-	6,477,158 B2	11/5/2002	Take	
		US-	2003/0067890 A1	4/10/2003	Goel et al.	
		US-	2003/0169824 A1	9/11/2003	Chayat	
		US-				
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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
J.G.		JP 06029922	2/4/1994	Mitsuru et al.		

Examiner Signature	<i>11 Jean Albrand Gelin</i>	Date Considered	<i>3/17/04</i>
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS.

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